

## Research Article



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## ADULT PATIENTS WITH DENTAL PAIN CORRELATED WITH THE FREQUENCY OF SELF-MEDICATION- A CROSS SECTIONAL STUDY

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### ABSTRACT

**Introduction:** The practice of self-medication is widespread worldwide. When people self-medicate, they run the risk of misdiagnosis, drug resistance or enhanced pathogen resistance, excessive dosage, expired medication, prolonged usage, drug interactions, and polypharmacy.

**Aim:** The purpose of this study is to find out how common self-medication is among adult dental pain patients and what characteristics are linked to these behaviours.

**Methods:** This cross-sectional survey was observational. A total of 200 participants were included in the current study after fulfilling the inclusion and exclusion criteria. After conducting a pilot research, the required modifications were made to the self-administered, closed-ended questionnaire that was constructed by analysing several studies. The participant received counselling on self-medication while filling out the questionnaire, and the completed form was gathered. Following data collection, errors and omissions were verified, and the findings were assessed and examined.

**Results:** 178 people (89%) used self-medication. There were 94 (52.8%) females and 84 (47.2%) men. The patients' ages ranged from 18 to 60 years old, with the majority falling between 25 and 35 years old. Of the responders, 86 (48.3%) had completed higher education. A total of 96 patients (51.3%) used painkillers on their own due to excruciating pain in certain situations. In our study sample, family/friend advice accounted for the majority of self-medication (42.6%), with chemist advice coming in second (21.3%). A maximum of 97 people, or 54.4%, used non-steroidal anti-inflammatory medications or painkillers for self-medication.

**Conclusion:** In our investigation, we found that self-medication was quite prevalent. People need to be made aware of the risks associated with drug use without thought. The community has to enforce drug control policies more strictly with relation to prescription and drug availability.

**Keywords:** Drug Resistance, Enhanced Pathogen Resistance, Excessive Dosage, Misdiagnosis, Self-Medication.

### INTRODUCTION

Self-medication is the practice of a patient taking medication without a doctor's guidance, either on their own initiative or at the suggestion of a chemist or layperson. This involves getting prescription drugs without a doctor's note, utilising expired prescriptions to get new ones, giving medications to friends, family, or co-workers, or using unused medications that are kept at home. Suggestions for self-medication might come from advertisements in popular periodicals, newspapers, radio, television, and social media also recommendations from neighbour, family, friends, chemists, or previously prescribed drugs.<sup>1</sup>

Self-medication is a widespread habit worldwide. Depending on the research population and age category in question, the prevalence of self-medication differs from location to location. Self-medication is a prevalent behaviour among both established and developing countries, according to several researches. In many nations, advancements in people's general awareness, educational attainment, and financial standing provide a solid foundation for effective self-medication.<sup>2</sup>

Research indicates that 68%–77% of European countries and 80%–94.5% of Asian countries, such as Saudi Arabia, Kuwait, Pakistan, and Bahrain, self-medicate for common health concerns. Additionally, it has been stated that the rate of self-medication in African nations like Egypt, Cameroon, and Nigeria is between 80% and 100%.<sup>3</sup> While in Palestine it is 98%. Pain, fever, headache, and cough were the most prevalent conditions for which people used self-medication.<sup>6</sup> It has been observed that 100% of Indians and 80.6% of Nigerians self-medicate for oral health issues.<sup>4</sup> We refer to the pharmaceuticals that are typically used for self-medication as "non-prescription" or "over the counter" (OTC) medications. The administration of these medications must be based on reliable medical data.<sup>5</sup>

In rural and distant locations where health care professionals or services are understaffed, inadequate, or unavailable, the World Health Organisation (WHO) has promoted the responsible use of self-medication for the effective and prompt alleviation of some common diseases.<sup>6</sup>

Advantages of Lack of time, resources, or accessibility to healthcare services are some reasons why people are turning to self-diagnosis and medication rather than consulting a qualified healthcare provider. Adopting a conscientious approach to self-medication might potentially save treatment expenses, travel duration, and physician appointment times. However, a number of research on the topic demonstrate that there are hazards, including polypharmacy in self-medicating individuals, medication interactions, excessive dosage, drug expiration, misdiagnosis, and drug resistance or enhanced pathogen resistance.<sup>7</sup>

Other dental issues that lead people to self-medicate include pain, halitosis, toothaches, and gingival bleeding. A toothache is a very painful experience. People who suffer with pulpalgia try to find comfort by using aspirin pills, clove oil, nicotine, and alternative treatments in addition to medical counselling and self-medication.<sup>8</sup> Additionally, current research has revealed that even after using analgesics for self-medication, up to 70% of individuals with tooth pain continue to report symptoms.<sup>9</sup>

This study set out to find out how common self-medication is among adult patients with dental pain and what characteristics are linked to these behaviours.

## **MATERIALS AND METHODS**

This cross-sectional observational survey was carried out at the department of Department of Periodontics and Oral Implantology, Padmashree D Y Patil University School of Dentistry, Nerul, Navi Mumbai, Maharashtra. The study population consisted of the dental patients coming to the OPD of the Institute. The participants were given an explanation of the definition of self-medication and the goals of the current investigation. After receiving assurances about the privacy of their personal data, each participant gave their informed permission.

The research included all of the patients who were healthy, above the age of 18, and willing to participate. This study did not include those who were unwilling to participate or who were less than 18 years old. The convenient sampling strategy, which is non-probability, was employed to perform the survey. 200 subjects in all met the inclusion and exclusion criteria and were added to the current research.

A pilot research was conducted before developing a self-administered, closed-ended questionnaire based on reviews of various studies and required modifications made in response. The local language was used to write the questionnaire. The survey had eighteen questions categorised into the subsequent sections:

All of the demographic data, including age, gender, marital status, and religion, was collected in the first section. The second portion addressed specific concerns about people's usage of self-care drugs to treat dental discomfort. With the aid of these questionnaires, we were able to gather data on complaints made, the length of time spent self-medicating, the reasons behind turning to self-medication, the drug or drugs used for self-medication, the source of the drug or drugs, the kind of self-medication and the amount taken, awareness of the potential side effects of the drug or drugs used, and the consequences of self-medication.

The participant received counselling on self-medication while filling out the questionnaire, and the completed form was gathered. Following data collection, errors and omissions were verified, and the findings were tallied and examined.

**Statistical Analysis:** SPSS version 21 was used to analyse the data, which were gathered in Microsoft Excel. The frequencies, percentages, means, and standard deviations of the data were displayed. Fisher's exact test was used for

comparative statistics, and a P value of less than 0.05 was deemed significant. The data were also graphically presented using bar and pie charts.

## RESULTS

Out of 200 individuals who reported having tooth discomfort, 178 (89%) took medication on their own. There were 94 (52.8%) females and 84 (47.2%) men. The age of the patients varied between 18-60 years and majority belonged to the age group of 25-35 years. 86 (48.3%) of the respondents had attained higher level of education, 59 (33.1%) attained secondary level of education, 28 (15.7%) attained primary education and 5 (2.8%) were uneducated.<sup>10</sup>

When asked why they self-medicated, 96 (51.3%) of the patients said it was because of pain that was, in some cases, unbearable, 58 (32.5%) said it was because they didn't have enough time to see a dentist, 24 (11.2%) said it was because of money problems, 11 (6.1%) said it was because they were afraid of the dentist, and 9 (5.1%) said they didn't know.

In our study sample, family/friend advice accounted for the majority of self-medication (42.6%), followed by chemist advise (21.3%), outdated prescriptions (16.2%), and self-knowledge (6.7%). When the study's participants were asked what kind of medication they used on their own, the majority (97 or 54.4%) reported using non-steroidal anti-inflammatory drugs or painkillers, 61 or 34.2%, using antibiotics, 8 (or 4.4%), homoeopathic medicine, and 12 (or 6.7%), using herbal remedies or homoeopathic remedies, which were followed by the use of salt in hot water and herbs.

According to the participants, paracetamol was the most often self-administered medication in 72 (40.8%) instances, followed by amoxicillin in 42 (23.5%) cases and ibuprofen in 15 (8.4%) cases. We found that 49 (27.6%) of the participants were aware of the negative effects of self-medication, such as allergies, upset stomach, and antibiotic resistance, whereas 129 (72.4%) of the participants were unaware of these consequences.

Furthermore, when asked if they thought it was better to visit a dentist rather than self-medicate, the majority—142 people, or 79.7%—said that they should, followed by 32 people (17.9%) who said they should only see a dentist if their problem is really bad, and 4 people (5.1%) who said there was no need to see a dentist at all.

## DISCUSSION

While it is true that self-medication can assist treat minor illnesses for which a doctor visit is not necessary, self-medication frequently has several negative consequences and can result in a number of issues, such as multi-drug resistance, dependency, and addiction. This result confirms the worldwide frequency that has been shown in the literature: 100% in a different Indian study, 80.6% in Nigeria, 80% in Saudi Arabia, and 21.7% in Brazil.<sup>10-13</sup>

It was discovered in this study that women self-medicate at a considerably higher rate than men. Similar findings were also reported by Arwa Aldeeri et al (2014)<sup>14</sup> and Anmol Zahoor et al (2015).<sup>15</sup> But in a different research of Saudi patients, males were far more likely than females to self-medicate with antibiotics alone (63.8% vs. 16.5%, respectively).

The current study's findings demonstrated that 178 (89%) of the participants self-medicated when experiencing dental discomfort, which is a rather significant percentage. The prevalence of self-medication is rising daily around the world, which is making medical treatments more challenging. In terms of what motivates people to self-medicate, the primary motivator in this study was toothache.

The medications utilised differed according to the respondents' opinions about how effective they thought each treatment was for their particular medical condition. Given that popular analgesics are readily available over-the-counter in the community, it seems sense that a sizable fraction of respondents utilised analgesics without a prescription, either by itself or in conjunction with other medications.

In our current study, friends and family ranked as the primary advisors for self-medication, followed by relatives. Pharmacist play a key role in giving advice to consumers on the proper and safe use of medicinal products intended for self medication. The participants gave a variety of excuses for their conduct, the most prevalent of which being pain—which in some cases was intolerable—followed by lack of time to see a dentist, financial hardships, and dental anxiety.

A comparable research by Arwa Aldeeri et al<sup>14</sup> indicated that 63.25% of people self-medicated, with women more likely than men to do so. The most commonly utilised medications, systemically, were paracetamol and salt in hot water applied locally. These medications were mostly obtained from pharmacies. Pharmacists were the ones who mostly advised utilising them. Abscess, toothache and gingival bleeding were the primary predictors of self-medication, with time constraints cited as the primary cause (54.55%).

Similarly, 100% of dental patients reported using self-medication, according to Kaif A. et al.<sup>16</sup> The most frequent reason for self-medication was mild sickness (36.6%), with toothache (52.6%) serving as the primary catalyst. They often utilised analgesics (48%), native herbs (297%) and other medications to manage oral health issues. For basic care, the majority of the participants saw a chemist (40.6%), and they only saw a dentist (84.6%) if the issue continued. The majority of people who self-medicated for oral health issues were aware that they should check the expiration dates of their medications.

The mean age of individuals who self-medicated for oral health issues was  $26 \pm 9.4$  years (52% males and 48% women), and the majority (46%) had a college degree, even though 69.97% of them did not work in the medical industry. Toothache was the most frequent cause of self-medication (56.5%), and the belief that dental conditions were not major health problems (36.8%) and lack of time to visit a dentist (376.6%) were the main drivers of self-medication. The majority of medications used for self-medication were analgesics.

In a similar vein, Mbanya NE et al.<sup>17</sup> revealed that 73.8% of the participants acknowledged self-medicating, with a 62% female preponderance. Analgesics (33.2%) and non-steroidal anti-inflammatory medicines (36.5%) were the most often utilised medications. Reasons for self-medication were unbearable pain 108(38.5%), financial difficulties 80 (28.4%), lack of time to consult a dentist and long waiting hours at the dental office 53 (18.8%). While 28.9% of respondents used appropriate self-medication, 71.2% of respondents used irresponsible self-medication. 45.2% of the medicine sources were pharmacies, while 38.5% came from non-pharmaceutical businesses such as previously prescribed drugs used at home. Of those who knew about self-medication side effects, 26% were aware of stomach ulcers, drug resistance, allergies and overdosing.

## CONCLUSION

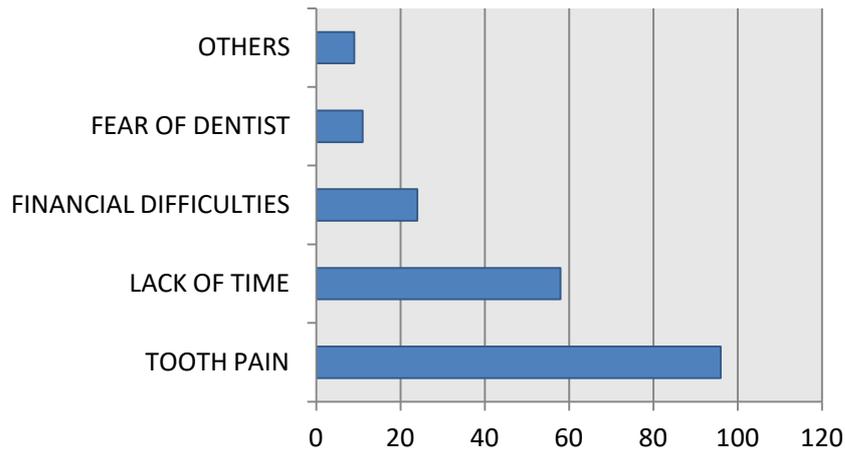
We can conclude that there is a significant incidence of self-medication in our sample. The complexity of dental treatments is rising in tandem with the global trend of self-medication. People need to be made aware of the risks associated with drug use without thought. The community has to enforce drug control policies more strictly with relation to prescription and drug availability.

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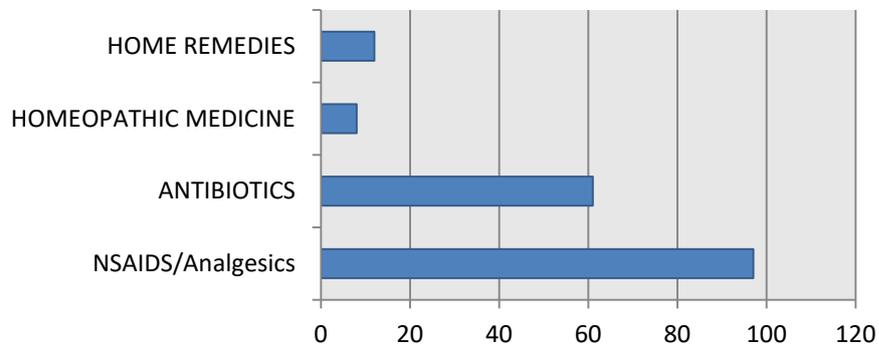
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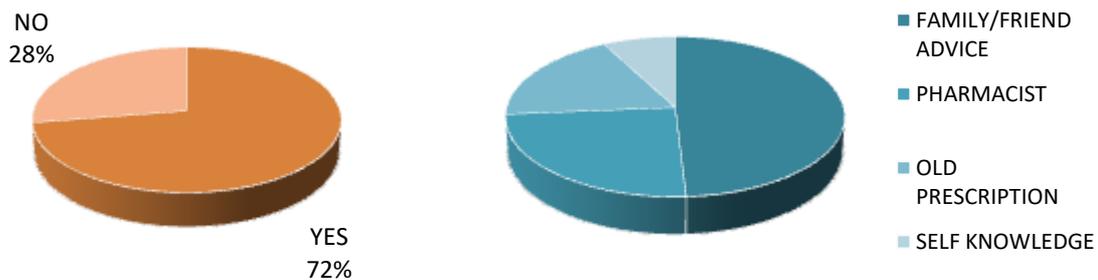
**GRAPHS**



Graph 1: Reasons of self-medication in the present study



Graph 2: Type of drugs used for Self-Medication



Pie chart 1: Knowledge of the Negative Consequences

Pie chart 2: Source of self-Medication